



Project Performance Assessment Draft Results General Findings

MTC Planning Committee

May 9, 2008

Process

TRANSPORTATION 2035 VISION

- Three E's and Goals
- Develop Performance-Based Scenarios
 - Define performance measures
 - Achieve with defined strategies
- Adopt Policy Performance Objectives (Jan. 08)

Project/Program Performance Assessment

Policy Assessment (adopt March 08)
Based on Vision Policy Strategies
- Investments, Land Use, Pricing, Technology,
Travel Behavior

Quantitative Evaluation (adopt Feb 08)
Based on Performance Objectives
- Delay, Emissions, Safety, VMT, Affordability,
Maintenance

Financially Constrained Investment (adopt July 08)
• Project Assessment: Policy & Performance Evaluation
• Tradeoff Discussions

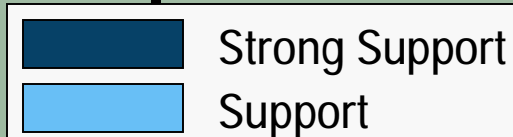


Qualitative Policy Assessment

- All potential discretionary investments (beyond committed)
- 21 project types representing 700+ projects
- Assess support for Vision Policy Strategies
 - Investments
 - Land Use
 - Pricing/Affordability
 - Technology
 - Travel Behavior

Qualitative Assessment

Draft Results




Project Type	Goals Met	Maint. & Safety	Congest. Relief	Emissions Reduction	Focused Growth	Access
Transit efficiency/expansion	4					
Bike and pedestrian	3.5					
Fwy & arterial technology	2.5					
TOD	2.5					
Maintenance	2					
Fwy-to-fwy interchanges	2					
HOT	2					
Lifeline transportation	1.5					
Local interchanges	1.5					
HOV	1.5					
Climate/emissions reduction	1					
Freeway expansion	1					
Arterial expansion	0.5					

Quantitative Evaluation

- **Compare costs and benefits relative to Performance Objectives**
 - Reduce delay, emissions, collisions, VMT
 - Improve affordability and system maintenance
- **Similar to Corridor Mobility Improvement Account I-Bond analysis**
- **Identify outliers**
- **Focus on key investment decisions**
 - 75 higher-cost projects/programs evaluated (beyond committed)
 - Transit & roadway expansion and efficiency – regional travel model
 - Regional programs – alternative methods

Performance Measures

- **Benefit-cost measure (monetized)**
 - Delay/travel time
 - Particulate and CO₂ emissions
 - Collisions
 - Direct user costs (vehicle operating or ownership)
- **Additional metrics**
 - Cost per VMT reduced
 - *Cost per low-income household served (transit only)-incomplete*
- **Annualized benefits & costs in year 2035**



Benefit-Cost for Regional Programs

- **Focused Growth: TLC, Bike Network**
 - Reductions in VMT, emissions and congestion based on research
- **Affordability: Lifeline, Means-Based Transit Discount**
 - Direct private savings in auto ownership and transit fares only
- **Emissions Reduction: Climate Protection, Truck Retrofit**
 - Emissions reductions only
- **Transit and Roadway Maintenance Shortfalls**
 - Avoided public costs and private costs to users
 - Savings to local agencies are potentially huge: \$2 to \$40 billion

Draft Findings: Benefit-Cost

High: B/C 10 or Higher

Transit efficiency

- SFMTA & AC Transit transit priority meas.
- Van Ness BRT

Roadway expansion - SR 84 widening

Freeway efficiency

- Freeway Performance Initiative (FPI)
- HOT lanes + express bus
(Santa Clara, Regional)

Medium-High: B/C between 5 and 9

Roadway maintenance

Roadway operations/expansion

- I-580 Truck climbing lanes
- Sol-80 reliever route
- Jepson parkway connection (Solano)

Freeway efficiency – HOT lanes + express bus (Alameda)

Fwy-to-fwy interchange – SR237/US101

Transit efficiency – Geary BRT

Benefit-Cost, cont.

Mid-Range: B/C Between 1 and 4

Transit expansion/efficiency

- BART to Livermore
- Marin County Transit
- I-80, I-580, I-680 express bus
- Geneva/Harney BRT
- Capital corridor

Fwy-to-fwy interchanges

- I-80/I-680/SR12
- I-580/US 101
- I-680/SR4
- 237/SR 85
- SR 25/US 101/Santa Teresa Blvd
- I-680 NB/I-580 WB interchange

Roadway expansion

- SR 12 widening
- SR 92 uphill passing lane
- SR 239 Brentwood/Tracy expressway
- SR 152 new alignment
- US 101 widening south Santa Clara County
- Jepson parkway phases 1 and 2
- Widen SR 4 to San Joaquin County Line
- Dumbarton Bridge access (San Mateo)

Regional programs

- TLC
- Port Emissions/Truck Retrofit

Transit maintenance

Low: B/C Under 1

Transit expansion - MTA historic streetcar

Regional Programs

- Lifeline
- Regional Bike Network
- Climate Protection

Roadway

- Single, direct HOV connectors/ramps
- Upgrade SR4 West to freeway

Draft Findings: CO₂ Specific

	Tons CO ₂ Reduced in 2035 (000s)	Cost per Ton CO ₂ Reduced
Most Effective/Cost-Effective		
HOT networks + express bus	100 to 600	\$200 - \$800
Climate Protection Program	300*	\$200
Freeway Performance Initiative	200	\$300
TLC	100	\$800
Limited Impact/Less Cost-Effective		
"Reliever" routes	10 to 20	\$500 to \$2,000
Transit exp./efficiency	2 to 5	\$1,000 to
Selected roadway exp./ interchanges		\$45,000
Increase CO₂ Emissions		
Selected roadway expansion	-3 to -15	NA

* For year 2015



Equivalent CO₂ Emissions Reductions

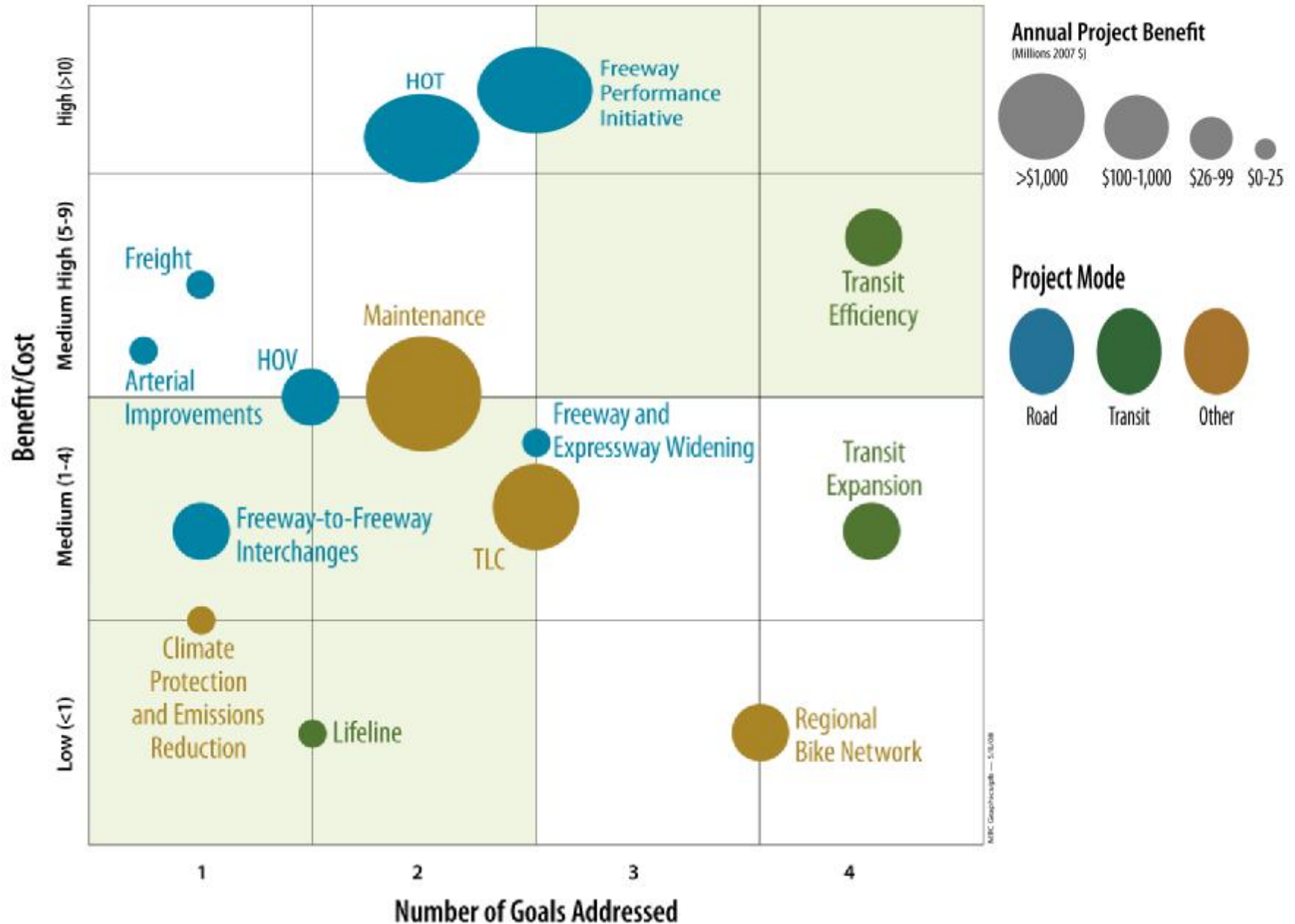
- Reduction of 100,000 tons/year is equivalent to*
 - One year of electricity use by 18,000 California households
 - Replacing 1.2 million standard light bulbs with compact florescent lamps
- 100,000 tons is 1.7% of total transportation emissions in 2035 (15,000 tons is 0.04%)


* Adapted from ARB Fact Sheet,
Conversion of 1MMT CO₂ to Familiar Equivalents (10/07)

Draft Findings: VMT Specific

	Millions VMT Reduced in 2035	Cost per Thousand VMT Reduced
Most Effective		
HOT networks + express bus	200 to 800	\$100 to \$500
TLC	200	\$500 to \$800
Less Effective		
Regional Bike Network	60	\$1,000
High volume transit (e.g., transit priority, SFMTA BRT, BART to Livermore)	7 to 50	\$200 to \$7,000
Roadway projects that provide direct routing (e.g., I-80 reliever, SR84)	6 to 8	\$500 to \$1,000
Increase VMT		
Most roadway expansion projects	-1 to -40	NA
Freeway Performance Initiative	- 66	NA

Project Performance Assessment





Informing Trade-Off Discussions

- 1. Ensure high-end performers are in the plan**
 - Multiple goals and high benefit-cost ratio
- 2. Include low-end performers only if compelling case is made**
 - Few goals and/or low benefit-cost ratio
 - Other considerations may be compelling (e.g., cost-effective for CO₂ reduction)
- 3. Some goals could be weighted higher than others**

Transportation 2035 Schedule

May	Review Performance Evaluation Results <ul style="list-style-type: none">• Partnership• Planning Committee• Joint Policy Committee• Commission Workshop Discuss Investment Tradeoff Options
June	Preliminary Investment Plan
July	Approve Investment Plan